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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|--------------------------|--------------------------------------|------------------------------------|
| 10/580,450 | 05/23/2006 | Geoffrey Howard Blackham | GJ-281J | 4200 |
| <div>7590 Iandiorio & Teska Jason D Shanske 260 Bear Hill Road Waltham, MA 02451-1018</div> | | | <div>EXAMINER TRA, TUYEN Q</div> | |
| | | | <div>ART UNIT 2873</div> | <div>PAPER NUMBER</div> |
| | | | <div>MAIL DATE 11/01/2007</div> | <div>DELIVERY MODE PAPER</div> |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/580,450

Applicant(s)

BLACKHAM, GEOFFREY
HOWARD

Examiner

Tuyen Q. Tra

Art Unit

2873

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 May 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 May 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 0506.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Oath/Declaration

1. The declaration filed 07/27/00 is acceptable.

Drawings

2. Drawings filed on 05/23/2006 are acceptable by examiner

Information Disclosure Statement

3. The information disclosure statement (IDS) submitted on 05/23/2006 is being considered by the examiner.

Claim Objections

4. Claims 7 and 8 are objected to because of the following informalities: The claims recite "the image generator" in line 3-4. There is insufficient antecedent basis for this limitation in the claim. Appropriate correction is required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-6 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Roddy et al. (U.S. Pat. 6,762,785 B2).

- a) With respect to claim 1, Roddy et al. discloses a first light source (figure 8, item 12), a primary modulator (figure 3, item 26R) for modulating light from the first light source (light coming from 12R to combiner 35, a modulated light source can be a light source), a second light source (figure 8, item 12BG), optical means (figure 8, item 35) for combining light from

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the second light source (12BG) with the modulated light from the primary modulator (12R), and an auxiliary modulator (figure 8, item 20) for modulating the combined light from the second light source (light coming from 12BG to combiner 35) and the modulated light from the primary modulator (12R) (col. 7, line 59 – col. 8, line 18).

b) With respect to claim 2, Roddy further discloses wherein the primary modulator (12) comprises a first primary modulator for modulating red light (figure 8, item 12R), a second primary modulator for modulating green light (figure 8, item 12G), and a third primary modulator for modulating blue light (figure 8, item 12B) (see figure 8).

c) With respect to claims 3 and 4, Roddy further discloses wherein the primary and auxiliary modulators are either transmissive or reflective light modulators (figure 8, item 20).

d) With respect to claim 5, Roddy further discloses wherein the first light source (12R) has a first spectral content (Red spectral) and the second light source (12BG) has a different (Blue-Green) spectral content.

e) With respect to claim 6, Roddy further discloses wherein the first light source has spectral content in the visible part of the spectrum (Red is visible spectral) and the second light source (12BG) has a spectral content in the infrared part.

f) With respect to claim 8, Roddy further discloses wherein the primary modulator (26R) is driven by a combination of output channels, and the auxiliary modulator (20) is also driven by a combination of output channels.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Roddy et al. (U.S. Pat. 6,762,785 B2), as applied to claim 1 above, in view of Ohara et al. (US Patent 4,535,342).

Roddy et al. discloses a first light source (figure 8, item 12), a primary modulator (figure 3, item 26R) for modulating light from the first light source (light coming from 12R to combiner 35, a modulated light source can be a light source), a second light source (figure 8, item 12BG), optical means (figure 8, item 35) for combining light from the second light source (12BG) with the modulated light from the primary modulator (12R), and an auxiliary modulator (figure 8, item 20) for modulating the combined light from the second light source (light coming from 12BG to combiner 35) and the modulated light from the primary modulator (12R) (col. 7, line 59 – col. 8, line 18); wherein the auxiliary modulator (20) is driven by a separate output channel. However, Roddy et al. does not disclose the primary modulator (26R) driven by an output channel. Within the same field of endeavor, Ohara et al. teaches the primary modulator (figure 1, item 3) driven by a separated output channel (column 2, lines 49-65).

It would have been obvious, therefore, at the time the invention was made to a person having skill in the art to construct the image generator with primary modulator such as disclosed by Roddy, and with the primary modulator (3) is driven by an output channel from the image generator such as discloses by Ohara et al., for purpose of driving the primary modulator.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuyen Q. Tra whose telephone number is 571-272-2343. The examiner can normally be reached on 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky L. Mack can be reached on 571-272-2333. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TT

October 17, 2007


DAVID SPECTOR
PRIMARY EXAMINER